Taxonomic notes on some Indo-Pacific and West African ***Drillia*** *species (Conoidea: Drilliidae)*

Notas taxonómicas sobre unas especies de ***Drillia*** *del Indo-Pacífico y África occidental (Conoidea: Drilliidae)*

Donn L. TIPPETT*

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ABSTRACT

Two uncommon turrid species, *Drillia dunkeri* (Weinkauff, 1876) and *Drillia enna* (Dall, 1918), have been reviewed on the basis of examination of type material, material discovered in the USNM collection or procured by the author, and study of the literature. The review permits clarification of their taxonomic status, localities, and ranges. A third, common, species, *Drillia regia* (Habe and Murakami, 1970), confused originally with *D. enna*, is similarly clarified. Confused with *Drillia dunkeri*, *Drillia umbilicata* Gray, 1838, type species of the genus, and a species resembling it closely, *Drillia patriciae* Bernard, 1984 are also reviewed.

RESUMEN

Drillia dunkeri (Weinkauff, 1876) y *Drillia enna* (Dall, 1918), dos especies de túrridos poco comunes, se revisan en base al material tipo, de colecciónes en el USNM o procurado por el autor, y el estudio de la literatura. La revisión permite clarificar el estado taxonómico, localidades y de rango. Igualmente se aclara la taxonomía de una tercera especie común, *D. regia* (Habe y Murakami, 1970), originalmente confunidida con *D. enna*. Debido a la confusion con *D. dunkeri*, tambien se revisa *D. umbilicata* Gray, 1838, la especie tipo del género, y una especie parecida, *D. patriciae* Bernard, 1984.

KEY WORDS: *Drillia*, taxonomy.
PALABRAS CLAVE: *Drillia*, taxonomía.

INTRODUCTION

Drillia dunkeri (Weinkauff, 1876), as *Pleurotoma* (*Clavus*) *dunkeri*, was described on the basis of a unique specimen from an unknown locality. It was reported later by SCHEPMAN (1913) on the basis of a specimen from a known locality, Macassar, Indonesia. Examination of Schepman's specimen validates the identification, and permits assignment of a type locality. Schepman's generic assignment, *Drillia*, is here accepted. Search of the USNM collection reveals 3 further specimens that are here identified as *D. dunkeri*. One (BARTSCH´s specimen [1943]) had been misidentified as *Drillia umbilicata* Gray,1838, and published as such, thus continuing the confusion that had existed as to the identification of the two taxa. The specimens noted provide a likely locality range for the species.

Drillia dunkeri Knudsen, 1952 is a secondary homonym of Weinkauff's

* 10281 Gainsborough Rd., Potomac, MD 20854 USA

taxon and requires a new name, which is here supplied, *Drillia knudseni*.

Pleurotoma enna Dall, 1918 was a new name for the preoccupied *Pleurotoma* (*Drillia*) *unifasciata* E. A. Smith, 1888. It was a literature change, along with a number of others, and it is highly unlikely that Dall (1918) had seen the type material. Abbott and Dance (1982) illustrated a shell as *Clavus enna*. Their figure is not of Dall's species, rather Habe and Murakami's *Clavus regius* (now *Drillia regia*), the earliest name for the species. Consequently, *D. regia* requires consideration in addition to *D. enna*. *Drillia enna* per se has been treated once only in the literature, by Gravely (1942), since it's description. His reported specimen and a specimen obtained by the author, identified as *D. enna*, are from Madras, India, near the type locality of Sri Lanka. This permits review of the species and range assignment.

MATERIAL AND METHODS

Specimens, including type specimens as available, of the taxa involved in the study were examined and compared. Comparisons were made on the basis of shell morphology using conventional characters, emphasizing size, shell and whorl outline, number, strength, and contour of the axial ribs and spiral sculpture, parietal tubercle development, development of siphonal fasciole and false umbilicus, color and color banding.

Abbreviations used:

BMNH: The Natural History Museum, London, UK [formerly British Museum (Natural History)].

MNHN: Muséum National d'Histoire Naturelle, Paris, France.

NSMT: National Science Museum of Tokyo, Japan.

USNM: National Museum of Natural History, Smithsonian Institution, Washington, D. C., USA [formerly United States National Museum].

ZMA: Zoölogisch Museum, Amsterdam, Netherlands.

ZMB: Zoologisches Museum, Berlin, Germany.

SYSTEMATICS

Genus *Drillia* Gray, 1838

Drillia Gray, 1838, *Ann. Mag. Nat. Hist.* 1: 28. Type species: *Drillia umbilicata* Gray, 1838, by subsequent designation, Gray, 1847, Proc. Zool. Soc. Lond. Pt. 5, No. 178: 134.

Description: Shell of small to large size (ca. 10-60 mm), elongate-fusiform, turreted, with moderately tall spire, truncated body whorl ending in a short, open, unnotched anterior canal with siphonal fasciole and false umbilicus of variable strength. Protoconch $1^1/_2$-3 smooth whorls, tip usually small. Adult whorls variably rounded, usually with a well marked subsutural shoulder slope sulcus, no subsutural cord. Sculpture of axial ribs and spiral cords/threads, ribs dominant. Sinus on shoulder slope, usually strong, with variable parietal tubercle and typically with well-marginated columellar callus. Stromboid notch and varix present in most instances. Usually unicolored whitish to biege, and may be banded. Radula characteristic of genus and family, "prototypic," with 5 teeth per row, consisting of unicuspid central, crescentic, comb-like laterals, and elongate, solid, awl shaped marginals.

Drillia dunkeri (Weinkauff, 1876) (Figs. 1-3, 6-8)

Pleurotoma (*Clavus*) *dunkeri* Weinkauff, 1876: 75, pl. 16, fig. 2 in Weinkauff and Kobelt, 1875-1887.

Drillia (*Brachystoma*) *dunkeri* (Weinkauff, 1876) Tryon, 1884: 179, pl. 8, fig. 24.
Drillia dunkeri (Weinkauff, 1876) Schepman, 1913: 416, unfigured.
Drillia umbilicata Gray, 1838, *sensu* Bartsch, 1943: 82, pl. 7, fig. 5 (the specimen illustrated is not *D. umbilicata* but *D. dunkeri*. The illustration is considerably retouched); not pl. 10, fig. 7 (this is the protoconch of another specimen, USNM 473178, misidentified as *D. umbilicata*. It is juvenile and may be *Drillia angolensis* Odhner, 1922, *Goteb. Kung. Veten. Hets-Samm. Hand.* 17, pl.1, fig.2).

Material examined: *Pleurotoma* (*Clavus*) *dunkeri* Weinkauff, 1876, holotype, ZMB, unnumbered, locality unknown, 30.0x13.7 mm (Figs. 1, 2); specimen, *Drillia dunkeri* (Weinkauff,1876) Schepman,1913, ZMA 188.0, Indonesia, Makassar (sic) and surroundings, 32m, mud, sand with mud and coral, Siboga Stn.71, 7 June, 1899, 37.5x17.7 mm (Fig. 3); *Drillia umbilicata* Gray,1838, syntype, BMNH 1875.4.29.2, Sierra Leone, western Africa, 32.6x14.1 mm (Fig. 4); *Drillia patriciae* Bernard, 1984, holotype, MNHN, unnumbered, Gabon, west central Africa, 27.2x13.1 mm (Fig. 5); specimen, "*Drillia umbilicata* (Gray, 1838)" Bartsch,1943, USNM 367041, "West Africa," 26.0x12.8 mm (Fig. 6); specimen, USNM 239134, Sibuko Bay, Borneo, Albatross Station 5593, 38 fm (69m), fine sand, 33.2x17.6 mm (Fig. 7); specimen, USNM 747290, off west coast Wasir Island, Banda Sea, Moluccas, 5° 30′ S, 134° 12′ E, 22-31 fm (39.5-56 m), sand and rubble, 15 April 1970, 29.9x14.0 mm (Fig. 8).

Description: Shell medium sized (to ca. 38 mm), elongate fusiform, turreted, spire angle 35-38°, large body whorl of $^{3}/_{5}$ shell length, tapering with moderate basal constriction to short, open, unnotched anterior canal bent slightly right. Protoconch 2 smooth whorls, 9-10 rounded, bulging teleoconch whorls. Wavy suture corresponding to the preceding axials, and rising on the preceding whorl at its termination. No subsutural cord, weak sulcus. Weak siphonal fasciole and false umbilicus. Sculpture of strong, broad, suture to suture axial ribs, 7 per whorl on spire, 6 including narrow varix on last. Posterior portion of ribs reduced in strength and curving over the sulcus area to preceding suture. Regularly spaced, spiral cords of moderate strength overall. Aperture parallel sided with deep, U-shaped sinus on shoulder slope, ending in low parietal tubercle on joining body whorl, and flaring, curved, outer lip edge bearing stromboid notch anteriorly. Varix narrow, extending curved with no reduction in strength to preceding suture. Color beige with broad brown peripheral spiral band.

Type locality: Macassar, Indonesia.

Range: Borneo, Macassar, Banda Sea, Indonesia.

Comments: Weinkauff (in WEINKAUFF AND KOBELT, 1875-1887) had studied and reported on a specimen from an unkown locality in the collection of R. W. Dunker. SCHEPMAN (1913) reported a specimen that he identified (but did not figure) as *Drillia dunkeri*, from Macassar in 1913. It is known that exploration and collecting took place by the Dutch during the mid nineteenth century in the area of the Macassar Straits. The Amsterdam and Leiden museums have considerable collections material labelled as from Indonesian sites including "Moluccas," and occasionally "Java" and "Celebes" (pers. comm., Dr. R. N. Kilburn). This would make it possible that Weinkauff's specimen could have been collected in those times in that area. Thus, Schepman's specimen collected from this region at a later date makes assignment of the site as the type locality appropriate.

Schepman's specimen (Fig. 3) is a dead, drilled shell, but adequately preserved for comparison with the holotype of the species. Although slightly larger and with a slightly more pronounced sulcus, it shares the essential features, overall shell form, minimal siphonal fasciole and false umbilicus, little-produced parietal tubercle, equivalent axial and spiral sculpture, and similar spiral banding. The slightly broader body whorl with less rounded whorl outline on the right side are artifacts resulting from a healed break. The remaining whorls have the usual outline. The range of shell morphology variation is suggested by this specimen and the others illustrated in Figures 6-8, the only significant variation being in shell width. The shell illustrated in Figure 8 was originally identified as "*Clavus tjibaliungensis* (K. Martin, 1895)", an Indonesian

Pliocene species, however the illustrations and description of that species do not conform to this specimen, which is here identified as *D. dunkeri*.

Differentiation from *D. umbilicata* (Fig. 4) is evident, the major differences being the strong siphonal fasciole and large false umbilicus, broader sulcus, markedly thickened and strongly margined columellar callus with pronounced parietal tubercle of *umbilicata*.

The confusion of the two species had begun, peculiarly enough, with a statement by Weinkauff (in WEINKAUFF AND KOBELT, 1875-1887) himself. He had described and illustrated his *P. dunkeri* quite well, and similarly describes and illustrates Gray's *umbilicata* reasonably well (1876: 50, pl. 11, fig. 3), although the shell figured (from unknown locality) is recognizable now as the closely allied species *Drillia patriciae* Bernard, 1984 (Fig. 5). Then, Weinkauff (in WEINKAUFF AND KOBELT, 1875-1887) makes an addition to his text (182, pl. 36, fig. 2) figuring *umbilicata* again on the basis of a specimen from Maltzan, obtained from the Bay of Goree, Senegal, Africa. This figure is a good representation of the species. Strangely, the figure appears to be the same as that published by MALTZAN (1883: 121, pl. 3, fig. 5). With the figure Weinkauff (in WEINKAUFF AND KOBELT, 1875-1887) states: "...the species described above as *Pleurotoma dunkeri* is apparently based on a juvenile example of *umbilicata*," thus synonymizing his own species *Pleurotoma dunkeri* with *Drillia umbilicata*. This is odd as it is obvious that the shell figure of *D. dunkeri* is not that of a juvenile. Subsequent authors continued this synonymy, first MALTZAN (1883), later TRYON (1884) and BARTSCH (1943). However, SCHEPMAN (1913) comments that Weinkauff's *dunkeri* is certainly adult, and is from a decidedly different locality than *umbilicata*, thus the two are not likely to be the same species. Regarding Bartsch's specimen, similarly misidentified as *D. umbilicata*, it is interesting in that it had come from the Casey collection, and Casey had obtained it from the dealer Fulton. It already had been identified as *umbilicata*, and was stated to be from "West Africa." Although usually reliable, diagnoses and locality data are known to be in error from this source.

It should be noted that *Drillia umbilicata* has been well illustrated by several authors, including REEVE (1843, pl.11, sp. 97) from the type material at the BMNH; MALTZAN (1883, pl. 3, fig. 5); THIELE (1929: 357, fig. 433). Further, TOMLIN (1934: 39) had stated that the types were at the BMNH, and that the species had been "validly described by Gray - from the Sierra Leone."

Drillia enna (Dall, 1918) (Figs. 9-11)

Pleurotoma (*Drillia*) *unifasciata* E. A.. Smith, 1888, *Ann. Mag. Nat. Hist.*, ser. 6, 2(10): 300, unfigured, not of Deshayes, 1835, *Exped. Scient. Moree* 3: 177, pl. 19, figs. 34-36.

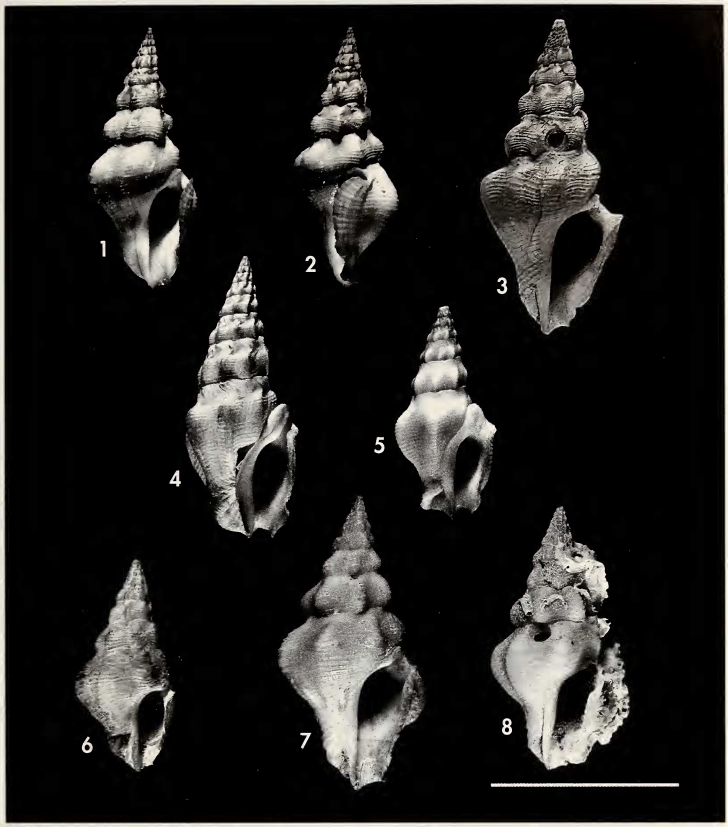
Pleurotoma enna Dall 1918, *Proc. USNM* 54(2238): 333, new name for *P. unifasciata* E. A. Smith, 1888.

Brachytoma enna (E. A. Smith, 1882) Gravely, 1942: 75 (listing and key), 101 (listing).

not *Clavus enna* Abbott and Dance, 1982, *Compend. Seashells*, pg. 242, illustrated; *Drillia* (*Drillia*) *enna* Springsteen and Leobrera, 1986, *Shells Phil's.*, pg. 268, pl. 76, no. 15; *Neodrillia enna* Kosuge and Toshio, 1993, *Mokuhachi-News* 9, fig. 7; Higo, Callomon, and Goto, 1999, *Cat. Biblio. mar. shell-bearing moll. Japan*, pg. 298 (list).

Material examined: *Pleurotoma* (*Drillia*) *unifasciata* E. A. Smith, 1888, holotype, BMNH, 1963188, "Ceylon, E. L. Layard," 34,3x14.6 mm (figures 9,10); specimen, USNM 880108, Madras, India, 20 fm (36 m), 38.6x17.7 mm (Fig. 11), ex colln. D. Tippett.

Description: Shell medium sized (to ca. 38 mm), elongate fusiform, turreted, spire angle 35°, with large body whorl of $^3/_5$ shell length, tapering slightly concavely to moderately long, open anterior canal. Moderate anterior fasciole and



Figures 1-3, 6-8. *Drillia dunkeri* (Weinkauff, 1876). 1, 2: holotype (as *Pleurotoma* (*Clavus*) *dunkeri*), ZMB, unnumbered, locality unknown; 3: specimen (*Drillia dunkeri* Weinkauff, Schepman, 1913), ZMA 188.0, Macassar, Indonesia; 6: specimen ("*Drillia umbilicata* Gray", Bartsch, 1943), USNM 367041, "West Africa"; 7: specimen, USNM 239134, Sibuko Bay, Borneo; 8: specimen ("*Clavus tzibaliungensis* K. Martin, 1895"), USNM 747290, west Wasir Island, Banda Sea, Moluccas. Figure 4. *Drillia umbilicata* Gray, 1838, syntype, BMNH 1875.4.29.2, Sierra Leone, western Africa. Figure 5. *Drillia patriciae* Bernard, 1984, holotype, MNHN, unnumbered, Gabon, west central Africa. Scale bar 25mm.

Figuras 1-3, 6-8. Drillia dunkeri *(Weinkauff, 1876); 1, 2: holotipo (como* Pleurotoma (Clavus*)* dunkeri*), ZMB, sin número, localidad incierta; 3: espécimen (*Drillia dunkeri *Weinkauff, Schepman, 1913), ZMA 188.0, Macassar, Indonesia; 6: espécimen (*"Drillia umbilicata *Gray", Bartsch, 1943), USNM 367041, "West Africa"; 7: espécimen, USNM 239134, Bahía de Sibuko, Borneo; 8: espécimen (*"Clavus tzibaliungensis *K. Martin, 1895"), USNM 747290, isla de Wasir del oeste, mar de Banda, Moluccas. Figura 4.* Drillia umbilicata *Gray, 1838, sintipo, BMNH 1875.4.29.2, Sierra León, África occidental. Figura 5.* Drillia patriciae *Bernard, 1984, holotipo, MNHN, sin número, Gabon, África centro occidental. Escala 25 mm.*

weak false umbilicus. Suture wavy, corresponding to previous axial ribs, moderate subsutural sulcus. Protoconch missing in type, tip missing in Madras specimen, $1^1/_2$ smooth whorls remaining. 8-9 teleowhorls with rounded bulging outline below sulcus. Sculpture of 7 unaligned axial ribs per whorl with wider interspaces. Ribs most prominent at lower part of whorl producing a "drooping" appearance. Last rib enlarged forming moderate varix on body whorl. Regularly spaced, low spiral threads with wider interspaces overall, cross ribs, reduced on sulcus. Fine incremental growth lines with fine beading of near "frosted" appearance overall. Aperture parallel-sided, moderately deep sinus on shoulder slope with slightly projecting parietal tubercle and small stromboid notch. Uniform light tan color with brown peripheral band and paler band or two at junction of anterior canal.

Type locality: Sri Lanka.

Range: Sri Lanka, Madras, India.

Comments: *Drillia enna* can be differentiated from the closely resembled *Drillia dunkeri* by it's relatively longer body whorl, stronger sulcus, "drooping" axials, weaker spiral threads, fine microsculpture, and slightly stronger anterior fasciole.

SMITH (1888) cites "Ceylon and China Sea" for locality, and the label for the type specimen refers to it as a "syntype." However, only one specimen is now present. Whether there was originally another specimen, or more, is not known. The specimen present, labeled "Ceylon, E. L. Layard," has a patch of dried glue on the posterior surface showing that it had been attached to the original label, which has been cut into a piece that is glued to a card. Possibly SMITH (1888) considered material he had seen from the China Sea as this species and, following his statement, the taxon was formally noted as a syntype by the museum. Smith's description suggests that the peripheral color band is stronger than observed, thus the shell must have faded.

The ex Tippett colln. specimen cited above (Fig. 11), a fresher shell in fine condition, shows the coloring and banding clearly, the shell structure matching the holotype nearly exactly. This is apparently only the third specimen of the species reported, a specimen, from Madras, having been reported by GRAVELY (1942: 75, 101). That shell was not seen by me, but it had been identified by Winkworth, who knew the Indian mollusks well and had access to the BMNH collection, thus the identification can be accepted. The specimen is in the Madras Government Museum (pers. comm., Dr. R. N. Kilburn).

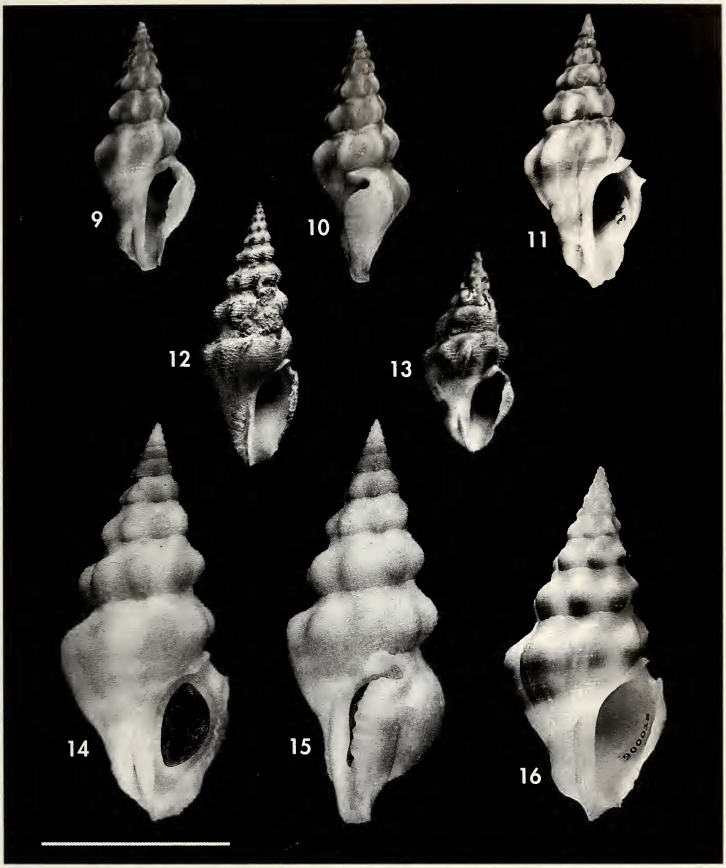
Dr. Kilburn has suggested that the Red Sea species *Pleurotoma* (*Clavus*) *siebenrocki* Sturany, 1900 (described in STURANY (1900), figured in STURANY [1903]) might be a prior name for *D. enna*. Although the figure of *siebenrocki* (from the Red Sea and reported as 36.7x14.0 mm) and a photograph of the holotype (Fig. 12) kindly made available by Dr. Kilburn (it was not possible to see the specimen of *siebenrocki)* appear similar, there are significant differences. The spire is taller and the body whorl shorter in *siebenrocki*, the sulcus much stronger, the siphonal fasciole being very slight, with no false umbilicus. The ribs are more numerous, narrower, not robust, being more pointed and slightly upturned, and do not extend upward over the sulcus to the preceding suture as they tend to do in *enna*. The spiral threads are different, being distinctly wavy and stronger.

Drillia regia (Habe and Murakami, 1970) (Figs. 13-16)

Clavus regius Habe and Murakami, 1970, *Pacific Shell News* 2: 6, 2 figs.; Inaba and Oyama, 1977, *Cat. moll. taxa described by T. Habe*, 1939-1975...: 101, pl. 7, fig 11 (designated holotype, a lectotype designation); Emerson and Sage, 1987, *The Nautilus* 101(4): 195.

Clavus enna Abbott and Dance, 1982, *Compend. Seashells*, pg. 242, illustrated.

Clavus (*Tylotia*) *enna* Okutani, 2000, ed., *Mar. Moll. Japan*, pg. 621, no.11, illustrated (*C. unifasciata* and *C. regius* cited as synonyms).



Figures 9-11. *Drillia enna* (Dall, 1918). 9, 10: holotype, BMNH 1963188 (as *Pleurotoma* (*Drillia*) *unifasciata* E. A. Smith, 1888), Sri Lanka; 11: specimen, USNM 880108, Madras, India. Figure 12. *Drillia siebenrocki* (Sturany, 1900), holotype (as *Pleurotoma* (*Clavus*) *siebenrocki*), RedSea, photograph courtesy Dr. R. N. Kilburn. Figures 13-16. *Drillia regia* (Habe & Murakami, 1970). 13: specimen, NMS 5263, off Rocktail Bay, north Zululand, South Africa, photograph courtesy Dr. R. N. Kilburn; 14, 15: holotype (as *Clavus regius*), NSMT Mo 53139, Okinawa, Japan; 16: specimen, USNM 900015, Mactan Philippines. Scale bar 25 mm.

Figuras 9-11. Drillia enna *(Dall, 1918). 9, 10: holotipo, BMNH 1963188 (como* Pleurotoma *(*Drillia*)* unifasciata *E. A. Smith, 1888), Sri Lanka; 11: espécimen, USNM 880108, Madras, India. Figura 12.* Drillia siebenrocki *(Sturany, 1900), holotipo (como* Pleurotoma *(*Clavus*)* siebenrocki*), mar Rojo, fotografiada por Dr. R. N. Kilburn. Figuras 13-16.* Drillia regia *(Habe y Murakami, 1970). 13: espécimen, NMS 5263, frente a la Bahía Rocktail, Zululand del norte, África del Sur, fotografiada por Dr. R. N. Kilburn; 14, 15: holotipo (como* Clavus regius*), NSMT Mo 53139, Okinawa, Japón; 16: espécimen, USNM 900015, Mactan. Filipinas. Escalas 25 mm.*

Neodrillia regia (Habe and Murakami, 1970) Higo, Callomon, and Goto, 1999, *Cat. Biblio. Moll. Japan*: 298, G3464; Higo, Callomon, and Goto, *Cat. Biblio. Moll. Japan, type figs.*, 2001, pl. 100, fig. G3464 (lectotype).

Drillia (*Drillia*) *enna* Springsteen and Leobrera, 1986, *Shells Phil's.*, pg. 268, pl. 76, no. 15. *Neodrillia enna* Kosuge and Toshio, 1993, *Mokuhachi-News* 9, fig. 7.

Material examined: *Clavus regius* Habe and Murakami, 1970, lectotype, NSMT, Mo 53139, Itoman, Okinawa Island, ?March 1969, Mr. Kina!, 54.4x25.1 mm (Figs. 14, 15); paralectotypes, two specimens, NSMT, Mo 53144, 60.5x29.1 mm, Mo 53143, 48.5x23.0 mm, data as per lectotype; USNM suite of six lots with 15 specimens from Balicasag and Mactan, Philippines (Fig. 16), ex D. Tippett colln. except one lot.

Description: Shell medium sized to large (to ca. 60 mm), heavy, elongate fusiform, turreted, spire angle 35-40°, large body whorl of 1/2 shell length, tapering with slight basal constriction to very short, open, unnotched anterior canal bent slightly right. Protoconch 2 smooth whorls, 9-10 rounded and bulging teleoconch whorls with strong suture that rises on the preceding whorl at its termination, no subsutural cord, moderately strong sulcus. Weak siphonal fasciole and false umbilicus. Sculpture of strong, broad, axial ribs, 7 per whorl on spire, 6 to expanded rib forming varix on last, and regularly spaced, fine, spiral cords overall, reduced on sulcus. Spirals variable in strength in different specimens. Often present are secondary short axial folds extending acoss the shell base intercalated between the major ribs. Also, variably present, there is a spiral row of fine nodules on the base. Aperture ovoid with deep, U-shaped sinus on shoulder slope ending in low parietal tubercle, and flaring, curved, fluted, outer lip edge bearing slight stromboid notch anteriorly. Color white with broad, strong, brown peripheral spiral band, frequently interrupted and composed of strong dots on ribs, perhaps with color blotches between. Often, a white band follows, then a pale brown band, another whitish band and a final brown band at junction with anterior canal.

Type locality: Okinawa.

Range: Japan-Okinawa, Philippines, S. Africa.

Comments: As noted above, *D. regia* was misidentified as *D. enna* by recent authors. *D. regia* is characterized by its large size, broad, bulbous ribs, body whorl of 1/2 shell length, colorfulness. *D. regia* is a large, handsome shell with the base color a bright white as opposed to the others in the complex which are drab. The Okinawa specimens have medium golden-brown banding, that of the lectotype tending to diffuse. In the Philippines the coloring is reddish-brown. Adult Philippine shells, which are common, range from 43.2x20.4 mm to 51.2x23.7 mm, USNM 900015 (Fig. 16) is 48.6x29.9 mm. Mactan specimens are broader generally than those from Balicasag. Although typically large, an adult from north Zululand measures only 27.5x11.9 mm (Fig. 13). This apparently represents a local population of small size. The illustration was kindly supplied by Dr. Kilburn, and shows bright red banding but little secondary banding.

Drillia knudseni new name

Drillia dunkeri Knudsen, 1952, *Viden. Meddel. Dansk Natur. Foren. Knoben.*114: 136, pl. 3, Fig 6; not of Schepman, 1913.

Comment: As noted above, with the generic assignment of *Pleurotoma dunkeri* to *Drillia dunkeri* by SCHEPMAN (1913), *Drillia dunkeri* Knudsen becomes a secondary homonym requiring a new name, which is here supplied.

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The author expresses his appreciation to the National Museum of Natural History, Smithsonian Institution, and the staff of the Department of Invertebrate Zoology for the opportunity of working with the mollusk collection and use of equipment and facilities. Professor Rudolf Kilias of the ZMB loaned the holotype of *Pleurotoma dunkeri*, Dr. Robert Moolenbeek of the ZMA Schepman's specimen of *Drillia dunkeri*, Dr. Hiroshi Saito of the NSMT the type specimens of *D. regia*, and Dr. Philippe Bouchet of the NMNH the holotype of *Drillia patriciae*. Dr. John Taylor and Ms. Kathie Way provided access to the type material of *Drillia umbilicata*. Dr. Richard N. Kilburn was especially helpful in bringing Schepman's and Gravely's references to the authors attention, providing the figures of *Drillia siebenrocki* (Dr. Karl Edlinger provided Dr. Kilburn with the print of *D. siebenrocki*) and *D. regia*, reading the paper, and discussing many points. Yolanda Villacampa of the USNM translated sections into Spanish, and Dr. Jerry Harasewych of the USNM was most kind in his help and support. The author thanks these individuals.

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